

and,

a semiconductor layer formed on said substrate,

wherein said semiconductor layer is formed from a group II metal oxide.

12. (New) The semiconductor device claimed in Claim 11,

wherein Ln is selected from the group consisting of Sc, In, Lu, Yb, Tm, Ho, Er and Y.

13. (New) The semiconductor device as claimed in Claim 11,

wherein the group II metal oxide is selected from the group consisting of zinc oxide (ZnO), zinc magnesium oxide ( $Mg_xZn_{1-x}O$ ), zinc cadmium oxide ( $Cd_xZn_{1-x}O$ ) and cadmium oxide (CdO).

14. (New) The semiconductor device according to claim 11,

wherein said substrate is a material selected from the group consisting of  $ScAlMgO_4$ ,  $ScAlZnO_4$ ,  $ScAlCoO_4$ ,  $ScAlMnO_4$ ,  $ScGaZnO_4$ ,  $ScGaMgO_4$ ,  $ScAlZn_3O_6$ ,  $ScAlZn_4O_7$ ,  $ScAlZn_7O_{10}$ ,  $ScGaZn_3O_6$ ,  $ScGaZn_5O_8$ ,  $ScGaZn_7O_{10}$ ,  $ScFeZn_2O_5$ ,  $ScFeZn_3O_6$  and  $ScFeZn_6O_9$ ,  
and,

ZnO is used as a material for said semiconductor layer.

15. (New) The semiconductor device according to claim 11,

wherein said substrate is a material selected from the group consisting of  $ScAlO_3(ZnO)_n$ ,  $ScFeO_3(ZnO)_n$ ,  $ScGaO_3(ZnO)_n$ ,  $InFeO_3(ZnO)_n$ ,  $InGaO_3(ZnO)_n$ ,  $InAlO_3(ZnO)_n$ ,  $YbAlO_3(ZnO)_n$  and  $LuAlO_3(ZnO)_n$ ,

and,

~~ZnO is used as a material for said semiconductor layer.~~

16. (New) A semiconductor device comprising,

a substrate containing a material selected from the group consisting of  $ScAlBeO_4$ ,  $ScBMgO_4$ ,  $ScBBeO_4$  and  $InAO_3(MgO)_n$ ,

wherein A is selected from the group consisting of Fe, Ga and Al,  
B is selected from the group consisting of Mn, Co, Fe, Zn, Cu, Mg and Cd, and  
a semiconductor layer formed on said substrate from a material selected from the  
group consisting of GaN, AlN, InGaN and AlInN.

17. (New) The semiconductor device according to claim 11,  
further comprising a buffer layer, between said substrate and said semiconductor  
layer,

wherein said buffer layer contains a material having a composition or a structure  
identical to that of said semiconductor layer as a base and slightly doped or undoped with  
impurities.

18. (New) The semiconductor device according to claim 17,  
wherein ZnO is used for said semiconductor layer, and  
said buffer layer is an insulating material slightly doped with an element capable of  
taking valence of 1 value or a group V element, an insulating semiconductor containing  
undoped and pure insulating ZnO or a combination thereof.

19. (New) The semiconductor device as claimed in claim 18,  
wherein said buffer layer is ZnO.

20. (New) The semiconductor device according to Claim 11,  
further comprising an insulating layer formed by using a material identical to that for  
said substrate for a basic structure.

21. (New) The semiconductor device according to claim 11,  
further comprising a light emission layer formed on said semiconductor layer by  
using a material having a composition or a structure identical to that of said semiconductor  
layer as a base, and

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a second semiconductor layer which is formed on said light emission layer by using a material having a composition or a structure identical to that of said semiconductor layer as a base, and which has a different channel from that of said semiconductor layer.

22. (New) The semiconductor device according to claim 21,  
wherein said light emission layer is selected from the group consisting of a multilayer structure of (Mg, Zn)O and ZnO, a multilayer structure of (Zn, Cd)O and ZnO, and a multilayer structure of (Mg, Zn)O and (Zn, Cd)O.

23. (New) The semiconductor device according to claim 11,  
wherein said semiconductor layer is an insulating semiconductor,  
input and output electrodes are further formed on said semiconductor layer, and  
a filter characteristic is provided.

24. (New) The semiconductor device according to claim 16,  
further comprising a buffer layer, between said substrate and said semiconductor layer,  
wherein said buffer layer contains a material having a composition or a structure identical to that of said semiconductor layer as a base and slightly doped or undoped with impurities.

25. (New) The semiconductor device according to claim 24,  
wherein ZnO is used for said semiconductor layer, and  
said buffer layer is an insulating material slightly doped with an element capable of taking valence of 1 value or a group V element, an insulating semiconductor containing undoped and pure insulating ZnO, or a combination thereof.

26. (New) The semiconductor device as claimed in claim 25,  
wherein said buffer layer is ZnO.

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27. (New) The semiconductor device according to Claim 16,  
further comprising an insulating layer formed by using a material identical to that for  
said substrate for a basic structure.

28. (New) The semiconductor device according to claim 16,  
further comprising a light emission layer formed on said semiconductor layer by  
using a material having a composition or a structure identical to that of said semiconductor  
layer as a base, and  
a second semiconductor layer which is formed on said light emission layer by using a  
material having a composition or a structure identical to that of said semiconductor layer as a  
base, and which has a different channel from that of said semiconductor layer.

29. (New) The semiconductor device according to claim 28,  
wherein said light emission layer is selected from the group consisting of a multilayer  
structure of (Mg, Zn)O and ZnO, a multilayer structure of (Zn, Cd)O and ZnO, and a  
multilayer structure of (Mg, Zn)O and (Zn, Cd)O.

30. (New) The semiconductor device according to claim 16,  
wherein said semiconductor layer is an insulating semiconductor,  
input and output electrodes are further formed on said semiconductor layer, and  
a filter characteristic is provided.